

REMARKS

The Office Action dated March 31, 2008 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-9 and 11-13 have been amended to more particularly point out and distinctly claim the subject matter of the invention. No new matter has been added and no new issues are raised which require further consideration or search.

The Office Action indicated that claim 3 has been allowed. Applicants wish to thank the Examiner for the allowance of this claim. However, claims 1, 2, and 4-22 are respectfully submitted for reconsideration.

Page 2 of the Office Action indicated that the IDS has been considered and a copy of the initialed PTO-1449 is attached to the Office Action. Applicant submits that no copy of the initialed PTO-1449 form was attached to the Office Action. A previous Office Action dated October 5, 2007 did include a partially initialed PTO-1449, however, not all references were considered. Applicant respectfully requests that the Examiner consider all of the references cited on the PTO-1449, including WO 01/93540, and re-submit a copy of the PTO-1449 with all references initialed.

Claims 1-13 were rejected under 35 U.S.C. §112, first paragraph, for allegedly reciting subject matter which is not adequately supported by the specification. Applicants have amended claim 1 to recite an "address management entity" which is configured to perform certain operations. Support for the "address management entity"

may be found on paragraphs [0030] and [0036] through [0038] of the specification. There is adequate support for the address management entity in the specification as filed. Withdrawal of the rejection of claims 1-13 is kindly requested.

Claims 1, 2 and 4-22 were rejected under 35 U.S.C. §103(a) as being unpatentable over Baum (U.S. Patent Publication No. 2004/0071164) in view of Donaldson (U.S. Patent No. 6,321,267). The Office Action took the position that Baum discloses all of the elements of the claims, with the exception of returning the held address to an end of at least one queue. The Office Action then cited Donaldson as allegedly curing this deficiency in Baum. This rejection is respectfully traversed for at least the following reasons.

Claim 1, upon which claim 2-8 are dependent, recites an apparatus that includes an address management entity comprising at least one queue configured to hold released addresses. The address management entity is configured to detect that a packet has been addressed to a released address held in the at least one queue, and return the held address to which the packet has been addressed to an end of the at least one queue.

Claim 9, upon which claims 10-12 are dependent, recites an apparatus that includes an address management entity configured to receive a packet addressed to an unused address. The address management entity is also configured to send an error notification to a network node configured to manage addresses, the error notification indicating the unused address.

Claim 13 recites a system that includes a first network node configured to manage addresses. The first network node comprises at least one queue configured to hold released addresses. The first network node is configured to detect that a packet has been addressed to a released address held in the at least one queue, and return the held address to which the packet has been addressed to an end of the at least one queue. The system also includes a second network node configured to forward IP data packets, receive a packet addressed to an unused address, and send an error notification to the first network node, the error notification indicating the unused address.

Claim 14 recites a method that includes detecting that a packet has been addressed to a released address held in a queue holding released addresses, and returning the held address, to which the packet has been addressed, to an end of the queue.

Claim 15, upon which claim 16 is dependent, recites a method that includes receiving a packet addressed to an unused address, and sending an error notification to a network node configured to manage addresses. The error notification indicates the unused address.

Claim 17, upon which claims 18 and 19 are dependent, recites a computer-readable program distribution medium encoding a computer program of instructions being configured to control a processor to perform certain operations. The processor may perform detecting that a packet has been addressed to a released address held in a queue holding released addresses, and returning the held address, to which the packet has been addressed, to an end of the queue.

Claim 20 recites an apparatus that includes holding means for holding released addresses, and detecting means for detecting that a packet has been addressed to a released address held in the at least one holding means. The apparatus also includes returning means for returning the held address to which the packet has been addressed to an end of the at least one holding means.

Claim 21 recites an apparatus that includes receiving means for receiving a packet addressed to an unused address, and sending means for sending an error notification to a network node configured to manage addresses. The error notification indicates the unused address.

Claim 22 recites a system that includes managing means for managing addresses, and holding means for holding released addresses. The system also includes detecting means for detecting that a packet has been addressed to a released address held in the holding means, returning means for returning the held address to which the packet has been addressed to an end of the at least one holding means, and receiving means for receiving a packet addressed to an unused address. The system further includes sending means for sending an error notification to the managing means, the error notification indicating the unused address.

As will be discussed below, the combination of Baum and Donaldson fails to disclose or suggest all of the elements of the claims, and therefore fails to provide the features discussed above. The rejection is respectfully traversed for at least the following reasons.

The Office Action again maintained the position that Baum discloses at least one queue configured to hold released addresses, as recited, in part, in claim 1. Applicant respectfully disagrees and submits that Baum does not disclose a queue configured to hold released addresses (emphasis added). Baum only discloses a pool of available addresses which are not released addresses (emphasis added).

A queue, may be considered as a type of pool having an ordered internal structure. A queue may be considered a subset of a larger pool. A queue may also be considered a subset of a pool, for example, the way copper is a subset of a metal. The “queue” recited in claim 1 is not the same as the “pool” disclosed in Baum. Paragraph [0102] of Baum discloses that “an IP address” is allocated from a “pool 1009”. Referring to FIG. 10 of Baum, the pool 1009 has no queue like structure as the cooling queue 10 illustrated in FIGS. 1-5 of Baum. Cooling queue 10 illustrates addresses [A1, A2...An] in an ordered manner unlike the simple pool 1009 of Baum used to identify a pool of available addresses. Baum does not disclose that any address would be a “next” address in the pool, as the pool does not include an internal ordered structure of a queue. Baum fails to teach or suggest “an address management entity comprising at least one queue configured to hold released addresses”, as recited in independent claim 1 and similarly in independent claims 13, 14, 17, 20 and 22.

In addition to the above noted deficiencies of Baum, the disclosure of Baum similarly fails to disclose “receiving a packet addressed to a released address, as recited in independent claim 1 and similarly in independent claims 13, 14, 17, 20 and 22. Baum

also fails to teach “an address management entity configured to receive a packet addressed to an unused address”, as recited, in part, in independent claims 9, 15 and 21. In attempting to teach these claimed features, the Office Action wrongfully equated the queue of released addresses, as recited in the claims, to the pool of unallocated addresses disclosed in Baum. Applicant disagrees that Baum discloses those features of the claims because Baum does not disclose any message addressed to an unallocated address in the pool 1009.

In paragraphs [0101] and [0102] of Baum there is no packet addressed to any of the released or unused addresses in pool 1009. Those portions of Baum disclose an IP address assignment request being forwarded to a DHCP server 520 which assigns the requesting device an IP address from the pool 1009 of available addresses. The IP address which is assigned is removed from the pool 1009 and is added to a table as a new table entry 1016. Paragraphs [0101] and [0102] of Baum do not disclose “receiving a packet addressed to a released address”, as recited in independent claim 1 and similarly in independent claims 13, 14, 17, 20 and 22.

In addition to the above noted deficiencies of Baum with respect to the claims, Donaldson fails to cure those deficiencies of Baum, as the teachings of Donaldson also fail to teach or suggest “at least one queue configured to hold released addresses”, as recited, in part, in independent claim 1 and similarly recited in independent claims 13, 14, 17, 20 and 22, “receiving a packet addressed to a released address”, as recited in independent claim 1 and similarly in independent claims 13, 14, 17, 20 and 22, and

“receiving a packet addressed to an unused address”, as recited in independent claims 9, 15 and 21.

Furthermore, it would not be obvious to combine the IP filtering scheme of Donaldson with the teachings of Baum. Donaldson is directed to filtering junk email. The method disclosed in Donaldson also provides the ability to automatically append IP addresses detected by certain sensor points back into an IP filtering list. Once the IP addresses have been detected, those hosts whose IP addresses have recently been detected can be subsequently blocked by a simple IP lookup mechanism. This provides a quick way to reject subsequent connections from IP addresses that have already been rejected by an active filtering operation. Baum does not seek to block or filter devices based on their IP addresses and has no relation to the teachings of Donaldson.

Donaldson discloses performing blacklisting of IP addresses. Nowhere in Donaldson, and in particular not at columns 6, 8, 18 and 24, is it disclosed that a packet is received from an IP address on the block list which moves the IP address from a first position within the list to the end of the list. Donaldson only discloses that a message may cause a sender’s IP address to be added to the end of the list in which case the IP address is not already on the list (see column 18, lines 12-29 of Donaldson). The teachings of Donaldson do not disclose or suggest to “return the held address to which the packet has been addressed to an end of the at least one queue”, as recited, in part, in independent claim 1, and similarly in independent claims 13, 14, 17, 20 and 22.

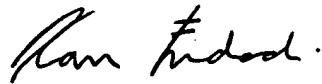
Therefore, Applicants submit that Baum and Donaldson, individually or in combination, fail to teach all of the subject matter of independent claims 1, 9, 13-15, 17 and 20-22. By virtue of dependency, Baum and Donaldson also fails to teach the subject matter of dependent claims 2-8, 10-12, 16, 18 and 19. Withdrawal of the rejection of claims 1-22 is kindly requested.

For at least the reasons discussed above, Applicants respectfully submit that the cited references fail to disclose or suggest all of the elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 1-22 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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